

an imaging camera configured to produce an image of a computer-readable code from a surface;

a shroud at least partially surrounding the imaging camera and configured to exclude ambient light from entering the imaging camera when the scanner is held against the surface and to hold the imaging camera in a selected relation to the surface;

a photodiode disposed within the shroud; and

an illumination lamp disposed within the shroud beyond, relative to the imaging camera, a limit line extending from an edge of a imaging region at an angle of inverse tangent $s/2d$ wherein s is one-half the width of the imaging region and d is the distance of the camera from the surface.

14. The method of claim 10 further comprising steps, after the scanning step, of:

evaluating an exposure level of the image of computer-readable code, and, if the exposure level is outside preselected limits;

adjusting an exposure parameter of the scanner; and

scanning the image of the computer-readable code from the electronic display.

17. The method of claim 16 wherein the exposure time is at least twice the refresh period of the electronic display.

18. The method of claim 16 wherein the exposure time is at least ten times the refresh period of the electronic display.

19. The method of claim 16 wherein the exposure time is between 10-20 times the refresh period of the electronic display.

23. A method of scanning an image of a barcode with non-square pixels displayed on an electronic display, the method comprising:

capturing the image of the barcode displayed on the electronic display;

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digitizing the image to create a digitized image;
providing the digitized image to a processor;
determining an aspect ratio of a barcode element, and, if the aspect ratio is outside of preselected limits;
scaling the digitized image to create a scaled virtual image with scaled barcode elements having aspect ratios within the preselected limits; and
decoding the scaled virtual image to obtain barcode information.

27. A method of scanning an image of a barcode displayed on an electronic display, the method comprising:

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evaluating the electronic display to determine if the electronic display is an emissive display;
capturing a first image of the barcode with an imaging scanner;
evaluating an exposure level to determine if the exposure level is within preselected exposure level limits, and, if the exposure level is not within the preselected exposure level limits;
adjusting an exposure parameter of the imaging scanner;
capturing a second image of the barcode with the imaging scanner;
attempting to decode the second image to obtain barcode information, and, if the attempt to decode fails;
measuring the electronic display for flickering;
determining a refresh period;
setting an exposure time according to the refresh period;
capturing a third image of the barcode with the imaging scanner; and
decoding the third image to obtain barcode information.

REMARKS

Claims 1-27 are pending, and claims 1-27 stand rejected. Claim 21 is objected to for failing to show trace ability of the refresh period measurement from the flowchart of Fig. 3B. Fig. 3B is amended to remove this objection in what is believed to be a self-